

APRIL 2005

FREE

TAX TIME:
4 TAX SOFTWARE
PACKAGES REVIEWED

HUB

DIGITAL

LIVING

VOLUME 18 NUMBER 4

SETTING UP A WIRELESS
HOME NETWORK

TEST LAB: 4 NETWORK
ATTACHED STORAGE
DRIVES COMPARED

HOME THEATRE
PROJECTOR BUYER'S
GUIDE

PHOTO CONTEST AND
MUCH MORE

NETWORKED HOME

SPLINTER CELL:
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Digital Imaging

Home Entertainment

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Wireless

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Letter from the Editor

Check out our new sections:

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- Home Entertainment
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- Wireless
- Total Gamer

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Photo spree



In selected regions ... and online

Not all stores run in all regions due to space constraints. Check our online options for the full range of products across all regions.
www.hubcanada.com/TheMagazine

- Upgrading brand name PCs
- PMA: The magapixel myth
- Home theatre project primer
- Choosing the Core



Editorial



Mean Fat Processing Driving Machine (with pluglines done for warming hamburger buns, if so equipped). To update the hype for connectivity, the above would likely be wirelessly connected to the home network. Meal plans are created in advance and shared across the network such that all the appliances can take a well-oiled machine. Upon arriving home late work, the oven has preheated and once frozen meat has defrosted and is ready for preparation. Meanwhile, the fridge has ordered the ingredients for next week's meal plan from an online grocery vendor.

While some such networked appliances exist, they're hardly enjoyed wide spread adoption as yet. IBM's Intelligent Oven was on display in the Microsoft Digital Home, a concept home at CES with a number of hidden and clever technology as a demonstration of what's currently possible. The intelligent oven is as its heart a refrigerator (and oven hybrid). Hooked up to the network via LAN cable or wirelessly, the oven will keep food cool then turn itself on at a specified time so the casserole is ready when you arrive home. If plans change and you're going to be later than originally planned, you can change the oven on time via the Internet or a cellular phone. At about \$9,000 (from USB \$5,000), it's likely too expensive for widespread adoption but is proof positive of the fact that, despite some false starts and over-excitement, we're making

ever closer toward a truly networked home. In the future, getting appliances installed or delivered could involve more than just a couple of delivery persons to lug the thing upstairs. Following code behind might be a network technician—perhaps even a member of Best Buy's Geek Squad making a tech support house call—to test new appliance owners through the "plug and play" installation process. And until technology reaches a point where it's completely reliable and literally plug-and-play, we'll probably all end up trying to figure out why the fridge just like screened. And dropped packets will have as much to do with the On C! Pass Java Seasoning mix than spiced on the floor as they will the fact that the oven can't pre-heat because it's showing a "404 page not found" error. The fully networked home of the future is still just a concept. However, with more and more devices in the home finding their way onto the network starting in the living room, perhaps it is only a matter of time before said network connects with every room in the house.

**Enjoy the Issue,
Andrew Mace-Croft
Editor in Chief**

Last month, we asked "What gadget or device do you use most often?"

J.T. White: The gadget that I use most often is my computer for Adobe Premiere Pro. Video editing has come a very long way since I was in college back in the mid eighties. The creativity those days can real well be shown on broadcast television in regards to effects, graphics, transitions, as well as general editing. We would have thought we could produce Hollywood-style movies and videos without the much of a learning curve? Well, it takes me in one hour to produce what would have taken me a month just over ten years ago.

This month, in addition to general feedback on the issue, we're asking for your thoughts on our question of the month: How networked is your home? Are you can startily connected with access from your wireless network or do you live a luddite's life? Either way, we wish to hear from you. Send your thoughts to Andrew@publshing.co

The Letter of the Month will win a mailed copy of McAfee VirusScan 5.003. McAfee's VirusScan prevents viruses when coming, downloading and surfing, and automatically identifies viruses, worms, Trojans, and other threats. It also provides defense against spyware and pop-up advertisements.

www.mcafee.com

Letter of the Month

Our Letter of the Month comes from Graham Wilson who writes:

After thinking of all the gadgets that I have in my life and trying to decide which one I use most often, it suddenly came to me that the piece of technology I use for the most is the battery charger. It seems all I do today is concentrate on the current battery level of my PDA (which I'm lucky to go 3 hours at work on without AC), laptops, cell phones, cordless phone charger based transmitters, drill, power screwdriver, flashlight, digital camcorder, and the AAAs in the MP3 player, mouse and keyboard. I've recently noticed the real meaning in the term "connected" lifestyle. Thanks for this opportunity to rant. If I am fortunate enough to win the 5-week contest I have only one question, isn't "cordless" is it?

For his letter, Graham wins a spiffy Microsoft 5-arch mouse, which he'll be happy to learn is not cordless. Congratulations Graham!

HUB

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A topic as dry as setting up, maintaining and troubleshooting a home network needs a lively style to keep from sliding into tech manual territory... and author Kelly Jones delivers the goods with *Home Networking Annoyances: How to Fix the Most Annoying Things About Your Home Network* (O'Reilly, \$36.95, ISBN 0-596-00880-2).

The book is essentially a giant FAQ divided into chapters like Software Annoyances, File-Sharing Annoyances and Network Printing Annoyances. In each chapter, common home networking issues are identified under a heading called "The Annoyance", followed by a section called "The Fix," which tells you how to deal with it. Covering everything from adding mailboxes, disabling the Windows XP firewall, configuring network adapters and routers, running cable between multiple floors of the house and configuring older computers to find a server printer, *Home Network Annoyances* comes with a ready-made chapter; visit <http://www.oreilly.com/catalog/errata/errata/chapters/index.html>

Home Networking Annoyances

Another month, another North American high-tech trade show. For March, it was CTA [Cellular Telephone Industry Association], the show for cell phones, wireless and related technologies held in New Orleans, Louisiana.

Rich data and multimedia applications like TV broadcast delivery were to be the biggest points of pride as manufacturers released barometers with those purposes in mind and software / services companies let loose the appropriate applications. Similarly, camera phones with ever increasing megapixel ratings were displayed on the floor, outpiped perhaps by video recording phones and digital audio player phones. Among some products at the show that will likely never make their way to North America — or if they do, they'll be a while coming — was Samsung's SCH-V700, a 3.2-megapixel camera phone when the manufacturers even MMC Micro memory card available in capacities up to a hefty 128GB (this for the SCH-V700 is the follow-up to Samsung's SCH-V700 3.2-megapixel camera phone [pictured]). It is a truly tiny 12 x 14 x 1.1 mm. MMC Micro is assigned for approval in shrinking cellular phones with expanding capabilities.

Sony Ericsson's first Walkman phone, the W600 was also on display. The phone has a 2-megapixel camera on board and will ship with a 512MB MemoryStick card. While the storage media used is a proprietary Sony technology, the music format it supports surprisingly isn't. Sony has had a ready-made crack with its own ATRAC3 in the past

Apple (www.apple.ca) recently rolled out the "second generation" of its colourful iPod Mini including a new 6GB unit for \$139.99. Sitting between the more than 20+ GB standard iPod and iPod Photo and the tiny 512MB 1GB iPod Shuffle the 6GB iPod Mini can hold between 1200 and 1500 songs (depending on length and level of compression), and has a much-improved battery life of approximately 38 hours per charge. The new Minis have had some minor cosmetic surgery, the colours in the trademark metallic shells have been tweaked so that they're more vibrant. The buttons on the scroll wheel now match the colour of the body as well. Second generation colours are silver, blue, pink and green, the gold model having been discontinued.

The 6GB Mini comes packaged with the standard white bud headset phones, but chip, USB cable and metal disc containing iTunes 4.7.1 and iPod Update software. Missing are the FireWire cable and power supply, the latter of which you have to be purchased separately for \$40.00 — the alternative being to charge the Mini through USB while connected to your computer, or to use a docking station or speaker system.



iPod Mini 6GB



but has apparently realized that a format war when consumers have already decided upon the formats they use perhaps isn't such a great idea. Instead, the phone plays AAC and MP3 files.

Nokia used the Cellular trade show to announce a substantial price drop for its second iteration N-Gage (the N-Gage DS). The drop applies to both the handset itself as well as games in the much-maligned game docks library existing and future. The unit itself can be had for US\$139.99 without carrier discounts and games for between US\$14.99 and US\$24.99 (Canadian pricing yet to be confirmed).

Cellular announcements at CTA

Income tax returns made simpler

Throw away that giant bundle of pink and blue forms, chipped up pencils and gaudy calculator. Completing and filing your income tax return electronically is a far more convenient way of doing things. Not only are the forms easier to navigate and all numbers calculated automatically, but upon completing your return you're one click away from filing it electronically over the internet using eFile.

So choose one of these software programs, do your taxes in a matter of minutes, and then go outside and enjoy the spring weather.

QuickTax

\$29.95 (standard version)

www.intuit.ca QDMS Free disk space

Platforms: Win 95/98/Me/NT 4.0 SP 6a/2000/XP

QuickTax is the most expensive tax software in our roundup, but the extra features, attractive interface and need of use that it brings to the tax filing process justify spending the few extra dollars.

When loading the software for the first time, the user is given the option of starting a new return or carrying forward information from a QuickTax 2003 return. You can also import financial details from Quicken or QuickBooks software.

QuickTax offers two methods of input depending on your familiarity with tax returns. The "Forms" method simply provides you with digital versions of the paper forms and lets you go to it, assuming you already have the necessary knowledge of how to fill out your taxes.

Themed online help, called "EasyStep" mode that walks you through the

process step by step and offers the necessary guidance on when to fill out where — it's the approximate digital equivalent of working into H&R Block. Using EasyStep, QuickTax will fill out your return by asking you a set of questions (for example, were you a student in 2003? Were you self-employed? An employee? And so on). It takes you through each section of the return, prompting you in advance as to what documents you should have prepared and on hand for the upcoming section.

As information is entered into the return, QuickTax displays it on the bottom half of the screen as it would appear on the blue paper forms.

QuickTax will also download and import tax slips such as T4s that you may have received through your or certain banking institutions that have online document saving features.

When it has finished calculating your return, QuickTax automatically issues it for errors or warnings — the company that makes QuickTax promises to pay any penalty caused by it.



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enclave

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Infinity

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extreme

Ultimate performance solutions with absolutely zero compromise.

reality

Industry-leading solutions and reliable server designs.

lyra

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coolflow

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hard!

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vivo

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think

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Quick Tax error – and even suggests potential tax-saving opportunities within the return that you may have missed based on how you responded to certain questions. From there, you have the option of saving the return, printing it, arranging a direct deposit for your refund, or filing your return directly using eFile or TeleFile.

The QuickTax license permits you to fill out six individual returns, or unlimited returns if the tax payer's income is \$25,000 or less. You can also file directly online (quicktaxonline.ca) without using software. This costs \$29.95 per individual return or \$24.95 for six individual plus spouse returns.

UFile / ImpôtExpert

\$29.95

www.ufile.ca 25MB free disk space

Platforms: Win 95/98/NT4/Me/2000/XP (online version supports Mac OS running the latest version of IE, though UFile says it won't fully test all the product on all versions.)

Not quite as elegant or user-friendly as QuickTax, UFile uses the interview method exclusively to fill out the tax return without actually giving access to the raw forms. Questions appear in the main box, with a drop-down menu on the left to navigate the various sections of the tax return.

Users may chafe at the fact that sections of the return only become available after you click them off in the "Interview Setup" phase. For example, if you answer that you are self-employed, then the self-employed tab and its relevant boxes will appear in the left-hand side navigation menu.

After the interview is complete, UFile calculates your return and, if applicable, provides a helpful summary of errors with a link back to the appropriate section of the return where the error is and suggestions on how to fix it.

Help icons after each line of the return link to a comprehensive built-in help database.

At any point during the interview, the user can navigate using one of five tabs across the top that lead to tutorial, interview, results, or a window where you can keep your return for mailing or file your return online via eFile.

UFile can import QuickTax information, and UFile online can be used to prepare tax returns as far back as 2000.

UFile can be installed on two computers and will prepare 30 returns, or unlimited returns for those with an income of \$25,000 or less. Additional returns can be purchased online at \$29.95 for 30 or \$39.95 for 20 (free for people with an income of \$20,000 or less).

TaxWiz

\$24.95

www.taxwiz.ca 3.5MB free disk space

Platforms: Win 95/98/NT4/2000/Me/XP

Definitely not a program for beginners, TaxWiz is tailored towards those who are already fairly income tax savvy. It offers two methods of completing a return: the first basically provides an electronic version of the actual paper forms with boxes to enter numbers into, and the second is the option of completing the forms by answering questions.



T1, and so on.), assuming you already know what they are and how to fill them out and a somewhat leaving you to wade through the forms yourself.

Processes such as adding new tax documents such as T4s and toggling between multiple documents are clearly marked and easy to navigate. Another advantage to replicating the paper forms is that you can see everything as being calculated on the fly, including what formulas the program is using, and so on.

You can check the status of your refund at any time by clicking the "tax forms" tab displayed at the top, and take along the bottom helpfully display ongoing calculations of taxable income, taxes due, total credits, and refund/owing amounts.

TaxWiz includes notepad and calculator applications, and a calendar drop down menu for selecting dates – nice touches.

TaxIcon

\$29.95

http://www.taxicon.ca

65MB free disk space (80MB on Mac)

Platforms: Win 95/98/2000/XP, Mac OS 8.5.2 or Classic



In addition to the CD-ROM version, TaxIcon can also be downloaded for free from the software's homepage at www.taxicon.ca. If you then decide to recompile your return and either file it online or print and mail it, you then must pay a fee to purchase the complete version of the software.

Like TaxWiz, TaxIcon is another no-frills program with a spartan black-colored display and simple tab-driven interface. When you start a new tax return, you're given a menu with five easily-navigable tabs of forms to fill out, organized by taxpayer information (address, social insurance number and so on), income and deductions, federal and provincial tax credits, summary of results, and filing your return.

Functions such as adding new T4 and toggling between multiple documents are extremely intuitive, and the software provides help files in each box that contain basic information as well as links to a more comprehensive explanation from the detailed faq on the Canada Revenue Agency's homepage.

The latest feature of TaxIcon is the prominently displayed box that shows your refund as it is calculated in real time.

TaxIcon is free for those with a net income of less than \$33,000.

By Eric Bell

Digital Photography Tutorial 15

Learning to see as the camera "sees"

Part 3: Focal lengths and composition

Suppose you want the subject of your photo to be a particular size in the frame. You have two options: move the camera closer or further away from the subject, or change the focal length of your lens. Zoom lenses, which offer a range of focal lengths within one unit, make it easy to do the latter, and because zoom lenses are now so common, we often forget that the other option even exists. However, moving the camera results in quite different compositions compared to zooming.

Try the following. Set your zoom to maximum wide angle and then adjust the size of a subject by moving the camera itself closer or further away until it is about half the height of the frame. Once you take that shot, set the zoom to maximum telephoto and then move camera back until the subject in your second shot is roughly the same size as it was in the first.

One of the accompanying photos was taken at 28 mm wide angle and the other at 450 mm telephoto (in 35 mm camera terms). The photos don't look much alike in spite of the fact that the main subject (Miss Bear) is roughly the same size in both.

Telephotos offer a narrower angle of view, so you don't see much behind the bear in the telephoto shot. Wide angle lenses offer a wider angle of view so more of the background appears in the photo. That's quite obvious. What's less obvious is the change in perspective. To make the bear the same relative size using a wide-angle lens, the camera has to be much closer to it, so the perspective changes – perspective being a function of camera-to-subject distance.

The perspective from a telephoto compresses the apparent distance between objects. Thus, rush hour traffic taken with a telephoto accentuates congestion by making the vehicles look even more jammed together than they actually are. Photo essayists of the 1970s and 1980s used telephotos in this manner to make strong statements about mass culture and urban congestion.

The perspective from a wide angle lens expands the apparent distance between foreground and background. Thus lenses are often used to shoot interiors of homes because they allow a photographer to take in more of a confined space, and at the same time have the effect of making the space look bigger. The result can sometimes be seen in brochures of 300 square foot condos that look elegant and expansive.

While not apparent in the sample photos, another significant difference between wide angle and telephoto focal lengths is their differing depth of field (zone of sharp focus). The bigger depth of field in a wide angle lens makes them a good choice when you want a lot of your scene, from foreground to background, to be in sharp focus. A telephoto, with its relatively shallow depth of field, helps put emphasis on a single subject by throwing the background out of focus.

By David Tanaka



Bonus: Miss Bear's Selfies: capturing a 450 mm telephoto lens
BelieveIt: Miss Bear captured at 28 mm wide angle

Questions and comments relating to the Digital Imaging section of *Hub Digital Living*, including David Tanaka's monthly *Digital Photography Tutorial*, can be sent to digitalimaging@publink.ca.

David Tanaka has covered digital technology as a writer and editor for more than a decade. Also a visual photographer, he became a digital convert in 1999.



Fun with Photoshop Elements 3 Foto-Fakery for Everyone

Author: Rhonda Driscoll

Publisher: Sam's www.samspublishing.com

ISBN 0-672-32730-0 Paperback 215 pages
\$34.95

The words "foto-fakery" in the subtitle of this book gives a good hint about the content. It's filled with examples and instruction on a wide range of Photoshop effects that move, remove, add, distort, tint or otherwise put stuff into photos that weren't originally there.

The result can be somewhat juvenile – do you really want to know how to plant crazy crazy things in food or give someone a bad complexion? If you do, you'll get plenty of help from this book. But even if you don't and can look beyond the general goofiness of the examples, you'll benefit from the instruction on some powerful features of this junior image editor from Adobe.



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Memory Express
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Pinpoint Computers
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249-810-1180

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www.pcvillagecanada.com
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Mega PC
www.megapc.com
914-545-4119

MicroStyle
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LCI
www.lci.com
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Test Lab: File serving a go-go

Networked Attached Storage (NAS) solutions

Network attached storage (NAS) solutions are gaining some ground in homes with a huge volume of data being stored and, in some cases, shared across home networks. No one seems to want to make up-front references to the NAS acronym for fear of scaring consumers off. The manufacturers that submitted solutions for this installment of the Test Lab each use their own descriptive buzz phrase: "Net Disk," "Shared Storage Drive," "Network Storage Center" and so on. The fundamental function remains the same.

NAS gained some popularity in small and home-based businesses, in spite of office environments, small is often administered off-site, as a Web site hosting and, where applicable, FTP (file transfer protocol) and administration. Thus, the need for expensive server racks for network storage is gone. Rather than drop several thousand dollars on rack-mounted servers, a small or even medium-sized office could get similar benefits from a much cheaper, smaller and more easily administered NAS drive.

In the home, the value proposition isn't quite as clear. However, as a means of drive backup, sharing of large files (such as video) across the network, and as an accessible repository for digital images, home NAS (or whatever name you decide to use) has a place in some networked homes as well as a steadily growing repository of data.

The key factor to NAS adoption is the growth of video on demand (VOD), say industry experts. When users can download high-resolution – even high definition – video on demand and easily share it across the network so that any computer or networked entertainment device can access it, high-capacity network storage options will become all but a requirement.

While a hard disk drive installed in a PC and offered as a shared drive across the network uses the resources of the computer it's installed in for file sharing across the network, NAS devices store and share data independent of a computer and its resources.

NAS devices differ from external HDD-based backup solutions whose primary purpose is to archive a PC's contents should the unthinkable (and inevitable) happen. In most cases, NAS drives offer network printing and either USB-connected device sharing across the network via USB ports.

While NAS solutions cost more per gigabyte than external drives, and considerably more than internal HDDs, the fact that they operate independently and can share USB devices across the network make the price premium much easier to justify.

Maxtor Shared Storage Drive

While Maxtor's Shared Storage Drive is physically the largest of the

Info Box

Maxtor Shared Storage Drive
Model HD10000 www.maxtor.ca
Capacity as tested: 30GB
Estimated price as tested: \$400
Drive: 8,000RPM
Estimated price per GB: \$13.33
Dimensions: 271x140x41 mm

Pros:

- Very simple setup procedure
- Good looking drive
- "Drag and Store"

Cons:

- No Mac or Linux support
- Physically large

drives tested, it's also arguably the coolest looking. This isn't a factor if the NAS is to be hidden away, but if it's going to be in plain sight, users likely want something that screams "high tech."

A NAS is only as good as the software that ships with it, and to that end, Maxtor's solution takes the cake in our tests. Not only was the drive recognized within 15 seconds of plugging it in, attaching an Ethernet cable and turning it on, but the setup software pre-defined standard share folders and offered to set secure passwords protected.



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• 1-button push auto backup
• Ideal for SOHO

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One-Button Backup Smart Drive



Overview
• 3.5" Hard drive enclosure
• Customized Mac & Drive Size
• 1-button push auto backup
• Ideal for SOHO

MSRP
\$59.99

Photo Storage

3-in Drive-Pro Family MSRP
VP300 w/o HD \$149
VP300 w/o HD \$169
VP300 - 500 18" HD \$219

Galaxy Family MSRP
Photo Back w/o HD \$49
PhotoViewer 17" LCD \$129

administrator only space on the drive. Simply put, Plexto's setup utility will try for the easiest to navigate.

Even with little networking experience, most users should be able to finish the setup procedure in less than 10 minutes. All that's required under Windows XP SP2 as tested is for users to plug an RJ-45 cable from the drive's LAN option port on an existing router or hub, plug in the power supply, turn the drive on, insert the included CD into a computer running Windows XP, 2000 or 98 on the network, and run the setup process. The Shared Storage Drive shows up immediately after the software completes basic configuration as a network drive behind the scenario under Windows. The drive can then be used as an installed drive and users can navigate and save files just as they would an internal hard drive.

A neat touch is Plexto's own Drag and Set feature. With it, any files dragged and dropped into the root folder will automatically be placed in the appropriate pre-configured folder. An MP3 file is automatically routed to "My Music" while an AVI or MPEG file will be routed to "My Movies" where it is accessible only to administrator account holders on the drive or those who know the administrator password. Dragging files into the shared portion of the drive will drop them in "Our Music" or "Our Movies" and so on, where they are accessible to anyone on the network. The Drag and Set option can be turned off by toggling a checkbox in the drive's user interface. In this interface, administrator account holders have access to more advanced functions like setting access privileges for shared and private folders. Unfortunately the drive doesn't support Mac OS.

Two USB 2.0 ports allow for network sharing of two printers, two USB drives or one of each.

The drive is also fairly quiet when in standard operation. When idle, it clicks in at about the level of a soft whisper, even with the rear-mounted internal fan spinning.

SimpleTech

SimpleTech's SimpleShare drive is clearly aimed at small or home office (SOHO) users rather than general home users. Its setup isn't as simple as

Info Box

SimpleShare Office Storage Server
Model: SS-NAS250
www.simpletech.com
Capacity as tested: 250GB
Estimated price as tested: \$450
Estimated price per GB: \$1.80
Dimensions: 220x160x36 mm

Pro

Advanced administrator options
-Mac and Windows compatible

Cons

Initially confusing to average users
USB ports too close together

the average home computer user might hope, and it would look more at home in an office environment.

The browser-based configuration utilities offer more advanced meter control over shared folders, disk monitoring, copying and creating pools, which make it a viable option for savvy network administrators.

Running "NASIndex" the drive was quickly discovered on the network and reported no problems. However, this browser-based application initially refused to move through its

next steps, which allow users to set an admin password and map the SimpleShare to an available local drive (later for full integration with Windows). Some trial and error later, disabling software firewalls, trying different browsers, reformatting and turning the thing on and off several times, the drive finally seem fit to cooperate. Its unclear what the problem was, alas. The SimpleShare also integrates with Mac OS X, but was only tested on machines running Windows XP and 2000.

Two USB 2.0 ports mounted vertically and side-by-side allow printers and USB disks to be shared across the network. However, the physical layout of these ports is such that wider USB keys have a hard time fitting beside each other. SimpleShare is unimpeachable to look at and is fairly quiet, clicking in at around the level of a soft whisper.

For home use, the SimpleShare's steep and potentially confusing consummating is overall. However, for SOHO applications where users have a better than average knowledge of networking, the advanced functionality of the SimpleShare make it a good bet.

Kimeta

Kimeta's NetDisk is a NAS of a different ilk as it can connect to and be shared over a network via Ethernet or to a single PC via USB 2.0 to act as a direct drive on one system. Hence it is afforded a slightly different acronym, NNAS for network drive attached storage.

The NetDisk housing is attractive and its small footprint relative to other NAS drives tested gives it a leg up if it is to rest on a desktop.

NetDisk's setup process is a little strange, rather than auto-directing on the network and pushing users through a simple setup, the install process has users inputting a 30 character code and a five character "secret key"

found on the bottom of the unit. Once installed, the drive acts exactly like an installed physical drive. The downside to this approach, however, is that by functioning like an installed drive, NetDisk doesn't look after setting up shared folders. Rather, the entire drive is shared and users must use other methods to protect personal files on the drive from other network users.

When other drives in the lab use fans as a method of cooling,

Info Box

Kimeta NetDisk
Model: NDUG-120
www.kimeta.com
Capacity as tested: 120GB
Estimated price: \$240
Estimated price per GB: \$2
Dimensions: 211x110x36mm

Pro

Small, quiet and fast

Cons

No USB ports for peripheral sharing
No on-board sharing settings





NetDisk uses its aluminum frame as a heatsink. The only moving parts in the NetDisk are in the actual hard drive. As such, it's the quietest of all drives tested — so quiet in fact that whatever noise it might make while idle is lost in the ambient sound of even a quiet room, making it impossible to get a proper dB reading.

NetDisk claims a transfer rate that is faster than any NAS solution and speaks the truth. Transferring survival test files — most notably, a folder of video clips just under 1GB in size — took under 2:30. Transferring the same folder to all the other NAS drives tested took just under 3:45.

Since the NetDisk doesn't have USB ports beyond its USB type-B port for direct PC connections, it can't share printers or other USB devices across the network. By purchasing a second NetDisk drive, users can set up RAID for data safety in the form of mirroring or striping. For faster data access.

Buffalo LinkStation Network Storage Center

It's not the most elegant solution either aesthetically or functionally, but Buffalo's LinkStation is a highly capable NAS device.

Another drive idea at home in a small office environment — preferably one with a network admin with a pass in front of broken English — (that is, the typical home network setup, the LinkStation packs in some useful features like an automatic or user-initiated backup process and FTP server setup and administration.

The automatic detection utility that starts off the setup process was hit or miss in our tests, both on a corporate and home network with software firewalls installed on the latter. The drive showed up in both cases in Windows' "My Network Places" folder, but LinkStation's own "Client Utility" reported only about 400MB of available space. Mapping the root of the drive as a network drive is a simple matter of choosing the appropriate menu option in the utility menu and reported about 130GB of available space. Attempting to use the IP setup

utility — which in our test operation is intended to find and/or assign an IP address to the drive on the network when multiple LinkStations are available on the network — is repeatedly failed and results in the following strange and potentially alarming (if it weren't so frustrating) error message: "Timeout can be put into effect. If not being used correctly stop the firewall and perform setup again."

Scanning through the 75-page PDF manual, we find out that since in the case the automated setup didn't work as intended and didn't launch the browser-based administration page, this utility must be accessed through a browser window using the address <http://LinkStation.name>. Once discovered, the LinkStation's administration page proved worth the search. In this page, the LinkStation or a portion thereof can be set up as an FTP server, accessible from outside to authorized users. Also, a utility called PCart allows the drive to be set up as a media server. Other options include automated backup of the LinkStation's contents to an attached USB drive and the standard options to set up shared folders, individual users and, obviously, business touch, user groups.

Two USB 2.0 ports, one mounted on the front, one on the back, allow for the sharing of USB printers and drives across the network.

If users have some networking knowledge at the ready, Buffalo's LinkStation has the most to offer behind the scenes. However, it's certainly not the most user-friendly option.

The bottom line

The NAS solutions in the lab were tested with an average home user in mind — a user without extensive networking knowledge who hopes for a simple setup process and easy administration thereafter. Maxtor's Shared Storage Drive is the clear winner when ease of use is the main criteria. Its overall good looks and intelligent network integration make it the best choice for non-network administrator users. Other options offer buyers more control and access to deeper functions of the drive, but lack the simple usability.

By Andrew Moon-Crippin

Info Box

Buffalo LinkStation Network Storage Center
Model: HD 120L44
www.buffalo-tech.com
Capacity as tested: 120GB
Estimated price: \$200 (see sidebar)
Estimated price per GB: \$2.50
Dimensions: 175x55x60

Pros:

- Advanced features such as an FTP server
- eSATA ports front and back

Cons:

- Potentially confusing setup process
- Not really attractive



DV, or Not DV

An engaging look at digital video: tips, tools and techniques

DV products are getting smaller every day, but they're getting bigger, too. That seemingly contradictory statement is keyway to introducing this new HUB column. It's all about video, large and small, digital and not.

This column will look at the latest and greatest digital video products now or soon in the market — those are the ones getting smaller and smaller. Some of today's digital video camcorders will fit in your pocket, or on the end of a keychain. Maybe that's good, but whether they have the functions, features, capabilities and price points you want or need is another matter.

This column will also look at the huge impact that digital video is having on our world — one that is only getting bigger. No longer are video tools reserved solely for established media companies to use. As the state of the art advances, access to the tools of the trade is open to consumers, hobbyists and aspiring professionals.

If you are new to digital video, this column will inform you and point the way to an exciting and creative new world. If you have some experience with the medium already, it will inspire you to greater heights with new insights and ideas.

First, though, another seeming contradiction: DV is always digital video, but digital video is not always DV. That affects how you use and choose your equipment.

DV, as an acronym, is the proper name of a internationally recognized set of technical specifications. DV, originally a consumer standard agreed

upon several years ago by many of the leading manufacturers, describes very precisely how video signals will be processed digitally. DV, for example, moves from a video camera along a special cable to a dedicated computer at 25 megabits per second — no more and no less.



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As a generic phrase, digital video includes DV, but also a number of other formats, and technical specifications. For example, a high end, high definition digital video format known as D10 or sometimes Digital S, moves at 100 Mbps — four times faster than DV, with a corresponding increase in price and quality.

DV, as a format, is recorded to tape — those familiar one-hour Hi8 DV cassettes, or larger-format full-sized cassettes. But other types of digital video can be recorded to tape, memory cards, and now even DVDs on other optical disc-based media. There are significant differences, both technical and aesthetic, between DV and other digital video formats that will be reviewed and explored in future columns.

For now, just keep that contradiction in mind: DV is always digital video, but digital video is not always DV.

Because here comes another contradiction you may have heard about: HDL, or "bad" cholesterol, is in the consumer electronics world, HDV is



References

Not just, at any rate, MTV is very exciting, and a big deal in the consumer and professional video world. It opens a very affordable path for video makers to create and deliver video with the look, feel and quality



By the way, just in case all the talk about digital specifications leaves you cold, keep in mind that column is called **DI**, or **Not DI** because there are still good reasons to use good old analog.

Rel. II. *unclonable* *vector* *commitment*

[illegible]

Lee Buckwood is a freelance writer and independent video producer. He operates Nord On A Wire, an independent company providing editorial, media production and consulting services to individuals and companies across North America. He can be reached at lee@nordonawire.com.

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The star of that show is found in the mid-range of digital imaging, where the reader's money is still reasonable and, says Rob Souders of Nikon Canada, where second generation digital camera buyers are most likely to look after running into the limitations of their previous models.

Kodak EasyShare Z7590 is a mid-range point-and-shoot with some more advanced features like manual control in writing the EasyShare line's mandate of "shooting made simple" and the handle-holding shooting modes and scheme symbols of Kodak digicams. In breaks with recent Kodak tradition by sporting a huge 18x optical zoom that is graduated for faster view framing, a sleek black casing and a rotating LCD screen. Shipping in May, the five megapixel camera should go for about \$550 in Canada (from US\$450).

Canon showed off its Exilim 3.2MP EX5100 around the neck of a female teacher. The EX5100 2.7 inch camera incorporates clear evidence in much of the optical assembly, allowing the ultra-pan device to include a 2.6x optical zoom. One of few cameras that carry by both the "versatile" or fashion market segments while incorporating mid-range camera features, the EX5100 has a two inch LCD screen and goes for an estimated \$410 (from US\$250).

Canon also announced two new additions to its Exilim line: the EX-2750 and EX-1750 two thin format cameras with large LCD screens at 2.5 and 2.7 inches respectively. Both are housed in slim brushed aluminum cases, and feature Canon's own extended battery life in the order of 365 shots in a single charge, measured to Camera and Imaging Products Association (CIPA, www.cipa.jp/english) standards. Both of the 3.2MP cameras are expected on the market in early April, prices to be determined.

Fujifilm showed off several cameras from each of its lines at the show, including its newest addition, the "T" line of fashion cameras. Only one entry strong thus far, the T series breaks with Fujifilm's tradition of sequentially alphabetizing its line with A being entry-level, B being about mid-level, F being the higher end of its line while the S series tends to satisfy professionals. The FinePix T1 is a 3.2MP "fashion camera" and features an impressive 2.5 inch LCD screen and a sleek outer shell in black or silver complete with sliding lens cover. The camera has a 3x optical zoom and is the first Fujifilm camera without an optical viewfinder. Fujifilm says it has compensated for this lack by incorporating its own LCD anti-glare screen film — a technology previously found in larger format LCD displays, according to Paolo Seto to release in June, it's expected to carry a retail sticker of around \$550 (from US\$450).

Nikon meanwhile, a company already well known in the SLR space, is growing its presence in the point-and-shoot entry-level and mid-range by making some additions to those lines with the Coolpix 4500, 5500 and 7500. As the numbering scheme suggests, price, performance and feature set increases accompany the higher model numbers.

Coolpix cameras in the company's P40 line take a close look at ease of use for consumers. Souders says, by offering features like in-camera cropping and red eye reduction, about 15 scene modes and a proprietary Nikon technology dubbed "iB Lighting" that even out dark or light areas of an image after capture, giving the original image for future use in its higher end models. The 4500, 5500 and 7500 have 1.8 inch LCD screens, feature Nikon's own iB (Ultra Low Dispersion) optical glass and have 4, 5.1 and 7.1MP resolutions respectively. The cameras are expected in early spring, pricing to be determined.

By Andrew Moore/Critique

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Canada: Bring on the HDTV

If anyone ever tells you Canada lags behind the US when it comes to adopting new technology, remind them that we were first to have high-speed Internet connectivity in the home, we bought MP3 players long before there were iPods, and the latest statistics show Canada as buying HDTV faster than our friends to the south.

That's right — a new study conducted by Beamix research for LG Electronics Canada found that Canadians are buying high-definition televisions at a much faster rate than Americans.

Specifically, 36 per cent of Canadian households have already invested in an HDTV ready television, which is a per capita rate more than 50 per cent faster than Americans (who are currently at 21 per cent adoption). What's more, 50 per cent of Canadian households have purchased HDTV-ready and audio-receivers of HDTV over standard definition TV.

The snag, however, lies in the availability of HDTV programming — or lack

thereof. Only 42 per cent of Canadians who own an HDTV-ready set are currently subscribing to high definition services through their digital cable or satellite provider.

"On one hand, these results are very encouraging," explains Steve Poirier, director for LG Electronics Canada. "Canadians are embracing HDTV, which is promising for the industry," but Poirier believes the survey's secondary findings on the weak consumer commitment to high definition services should make the industry open its eyes.

"The problem is the fact that many Canadians are unsure what the future holds when it comes to HDTV programming," says Poirier. "There is a clear gap here between the consumers, the broadcasters, the CRTC [Canadian Radio-television and Telecommunications Commission] and the manufacturers. As manufacturers, there is only so much we can achieve. It is essential that an industry-wide initiative be established to ensure HDTV



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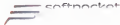
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services keep up with the growing demand for HDTV programming." Freiser says consumers would adopt HDTV even faster if there was more high-definition programming to entice them to upgrade their set. Currently, Bell ExpressVu has the most HDTV channels at 25, followed by Rogers at 24 and Star Choice at nine. Some stations rotate between movies, sports and prime-time programming. In the US, the Federal Communications Commission (FCC) has already established such a precedent: By July 1, 2006, 50 per cent of television networks in the 25- to 36-inch screen size must include a digital tuner capable of receiving HDTV signals. The CRTC, on the other hand, is asking digital television broadcasters to ensure that two-thirds of their schedule is available in high definition by December 31, 2006.

A word on HDTV types

Confusing as it may be, consumers today have a range of options when it comes to purchasing a new HDTV. Here's a brief look at a few of the technologies in the marketplace today, including pros and cons for each.

Plasma televisions contain a mixture of neon and xenon gases that fill the small space between two sheets of glass. When this mixture is stimulated by an electrical current, the process creates a vibrant picture. These flat-panel TVs are thin enough to hang on a wall, though they should be mounted as they can weigh considerably more than LCD displays. Plasma TVs can be pricey, and they suffer from "burn-in" should a static image be left on the screen too long, but their lifelike picture makes them a preferred big-screen technology among moviehome theatre enthusiasts. Also, there is some concern over a plasma TV's lifespan, but current generation models may last up to 30,000 hours (or between 13 and 20 years, depending on usage).

While significantly smaller in screen size than plasmas and projection HDTVs, LCD TVs have their advantages. They are extremely thin and lightweight and can be hung on a wall like a picture frame, and they are much more energy efficient compared to other TV technologies. These televisions also enjoy a bright, crisp display, with deep blues and rich reds, and do not suffer from burn-in, making them ideal for gamers. That said, LCD televisions may have problems displaying fast motion (such as in games or sporting events), causing viewers to see "ghosts" or "trails" that follow a moving subject. Therefore, look for a 25 ms (millisecond) response rate or lower (12 ms is ideal).

Based on the Digital Light Processing technology from Texas Instruments, rear-projection DLP TVs offer a big-and-bright display in a relatively lightweight cabinet (less than 85 pounds). They're still not thin enough to hang on a wall like plasmas or LCD sets, but with some DLP cabinets as narrow as seven inches deep, they won't take up too much space in the family room either. DLP televisions can be 50 per cent cheaper than plasma televisions, or about two-thirds the cost of LCD. At the heart of every DLP projection TV is an optical semiconductor that can be considered the world's most sophisticated light switch. This chip contains more than one million microscopic mirrors (each one-fifth of an inch in width) that move back and forth to create the picture on the screen.

By Marc Saltzman

Questions and comments relating to the Home Entertainment section, including Marc Saltzman's monthly column, can be sent to homeentertainment@poststar.ca.

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Home theatre project primer

Projectors are capable of making the largest images you can buy. They can weigh as little as two pounds and make images as large as 20 feet diagonally or bigger. Costing an average between \$1,500 and \$2,000, projectors have come down in price to the point where even more rentals can afford one, but it's still a large amount of money to spend on some thing you may not know much about. Hopefully, this article can take some of the roadshow out of buying a projector.

No matter what type of projector you're considering, creating a 20-foot image has its challenges. For instance, the light output from a projector competes with the ambient light within a room. The image can look dim and washed out or even disappear if the projector isn't bright enough. Light output is measured in lumens and you should get as many as you can afford, particularly if you use the projector for presentations. However, for home theatre, a projector doesn't need to be incredibly bright to do the job. Typically, home theatre units are no more than 1,500 lumens. Some manufacturers advertise they are used in a dark room.

The most important specification for home theatre use is contrast ratio. It is expressed as a ratio like 1000:1, where the brightest white is 1000 times brighter than the blackest black. The higher the ratio, the more grey levels and colours you can put between those high and low points. (Yes, theoretically anyway. More grey levels add detail to the picture so you would see, for example, black cars on a road at night, black, newsprint on the page. Above a certain point, 800:1 for me, contrast ratio differences are hard to notice. Also, ambient light spilling onto a screen can quickly reduce contrast ratio, because the darkest part of the image gets brighter and this skews the ratio. Even a little ambient light can change an 800:1

contrast ratio to 600:1. That can be impossible to control if you're on the road making business presentations but it is imperative that you make your home theatre as dark as you can. If you do have ambient light issues, it is better to get a brighter projector than a higher contrast one. The contrast you see will be nowhere near the capability of even the lowest contrast projector.

Another issue of concern to home theatre users is fan noise, which can be distracting during the quiet moments of a movie. Fan noise is expressed in decibels (dB) — the lower the number, the better. A person whispering is about 15 to 20dB and a quiet conversation starts at around 40 to

Projector imaging technologies

Manufacturers are working hard to continuously improve projector imaging technologies and these generations may not exist.

Digital Light Processor (DLP)

Pros: High contrast, smooth image, small projector

Cons: Mixed colours, colour breakup (rainbow effect) on single chip designs

Liquid Crystal Display (LCD or LCOS)

Pros: Good colour, high resolution

Cons: Screen door effect, contrast, rough pixels

Liquid Crystal on Silicon (LCOS)

Pros: Smooth image, high resolution, good colour

Cons: Bulky presentation, expensive, contrast

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5000, with most projectors being somewhere in between. All important to any type of projector is its "native resolution," the higher the better. If you are using PowerPoint or watching DVDs, SAGA (800x600) is usually enough. Every common type of digital projector uses a fixed-resolution imaging device. This means it must scale the incoming image to fit its native resolution. If you feed an XGA (1024x768) signal into a SVGA native projector, it comes out SVGA no matter what. The quality of that scaling is important, too. If a projector is good, it smoothly scales the incoming video with no noticeable errors or jaggies. Non-computer video is also decoded and de-interlaced, which can be an additional source of error. This is something that you must inspect yourself and is more important for home theatre projectors than business ones. If the external scaler isn't very good, you can always change the output resolution of your computer to match the native resolution of the



projector — essentially bypassing the scaler — but you can't do that with the video sources in a home theatre.

Finally, the last big issue for a projector buyer is lamp life. Replacement lamps are surprisingly expensive, starting at \$400, and are typically rated to last 2000 hours. That works out to 20 cents per hour to run. Keep in mind that if you watch a two-hour movie a day, your lamp will still last you more than two and-a-half years. It's still cheaper than going to the theatre. No matter what imaging technology the projector you are considering uses, if it is bright, high contrast, quiet, high resolution, a good scaler and has a cheap lamp, you're doing well.

By Andrew Demuth



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MP Glasses from CIGITEK (www.cigitek.com) are intended as a heads-up display for laptop computers, PDAs, portable DVD players and game consoles — pretty much anything that outputs a display signal to HSC (high-speed) standards and capable of connecting via RCA inputs. In comparing applications on-screen text is too difficult to read on the 300,000 pixel virtual 20-inch screen. Also, any adjustments users make to the glasses have to be of the physical variety as there are no apparent on-screen menus for common adjustments like brightness and contrast. Changing focus, for example, is accomplished by adjusting the length of the nose bridge. The glasses themselves run on a three AA batteries installed into an input and power pack that can be worn on a belt and last for a few hours under



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battery power. A volume control also atop the battery pack as does a mini-plug to RCA input jack for which the adapter is included. Users can also plug the glasses in using the included AC adapter.

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Bits & Bytes: The changing face of convergence

Industry mavens have been predicting convergence for years. And the public actually bought in, and all be seated in front of our computers every time we wanted to make a phone call, watch television, get a news, check our messages or listen to music. Currently though, none of these have any significant basis in reality.

We all seem, despite the inherent inconveniences, to prefer compact, integrating our technology. VCR/television combo units, all in-one stereo systems, combination telephone/browsing machines and the like have been around for years, and yet have never been as popular as their component based competitors.

While we may like the advantages of computer based versions of our favourite tech toys, we simply don't purchase them as replacements. Are we just slow to change old habits? Are we perhaps concerned about the risks that single points of failure represent in potentially bringing all our technology to a grinding halt? Or do we just like having more things boxed around the house? Well, perhaps we can have our cake and eat it too.

Companies are now turning to client server technology in an effort to provide consumers with core experiences for all our digital content. The concept is that given the vast and inexpensive capacity available on today's hard drives, you can centrally store your entire music collection, recent television shows, archive movies and photos — indeed anything you can create digitally — and stream this content to unobtrusive client devices throughout your home by way of wireless networking. For example, a new product called MP3 Streamer (www.mp3streamer.com) targets consumers who want to store their entire music collection dig-



itally and "beam" it to various devices around the home including other computers, your iPod, PDA and home theatre. The product is sold as a stand-alone unit for around \$400 (from US\$299) or as software you can install on your own PC for around \$65 (from US\$60 US). MP3 Streamer will both process your complete collection by ripping and CD after another while

concurrently pulling album and song details from the Internet to include as extended information in the MP3 file.

Truth be told, however, MP3 Streamer is really only a tweaked version of some free open source software originally designed for the Linux OS but now also available on Windows and Macintosh. Streamer may be downloaded at no cost from www.streamer.com and features all the basic functionality of MP3 Streamer.

Once your collection is digitized, you are ready to either serve your content to other networked devices or stream live to a wireless web receiver.

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the SHC's SHCMA 8 (www.shc.com). This product enables you to enjoy all your computer hosted tunes over the home stereo with full digital clarity – without ever having to change a CD. Including a full-featured remote control, this device at around \$150 (from US\$125) not only facilitates playback of your own audio collection but allows you to stream thousands of internet radio stations from all over the planet. Microsoft, not to be left out of the action of

gigs and even complete services can undertake some of the traditionally more challenging computing tasks with ease. With the addition of a wireless client (as supplied by HP) Cisco even an adaptor for your Xbox, you can enjoy your audio- or video-based digital content from anywhere in the home. The OS supports up to three video capture devices (one HDV), which allows you to record one program while watching another, or simultaneously view different feeds on a variety of devices. Users can also paste photo slideshows complete with soundtrack, see who's calling on the telephone (or set to 'do not disturb' while watching a movie), author and slide DVDs or share photos with friends over the Internet. While there is clearly a bright future ahead for digital media, it remains to be seen whether this new client server strategy will bear fruit for manufacturers. While I'm betting mine, I'd wager this equipment will not become mainstream for a year or two at least.

By Ray Richards

Questions and comments relating to the Personal Computing section, including Ray Richards' Bits & Bytes column, can be sent to personalcomputing@publishing.ca

course, recently launched Windows XP Media Center Edition 2005 (www.microsoft.com/windowsxp/mediaserver/). This software is considerably more comprehensive than MP3 streamer as it includes provisions for all digital media types. Media Center is a full desktop operating system (XP Service Pack 2) with tons of extremely easy-to-use applications housed in a completely redesigned user interface. Clearly focused on the home user, Media Center Edition is a snap to use

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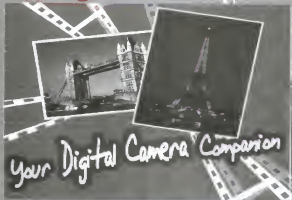


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PC Music Making 2

Last month I talked about how easy it is to record music into a PC by plugging your instruments and/or microphones directly into the computer's soundcard (using an inexpensive software program to edit).

Now that you've got a barebones studio set up and have familiarized yourself with the basics of how audio input and editing works, you can start paying attention to the quality of the sound itself. While recording directly into a computer soundcard is an acceptable way of creating cheap and dirty audio tracks, you have limited means of controlling the

quality of that sound. Common problems include a sound level that's too quiet, or so loud that it distorts, or has unwanted noise, popping and hum, or a collection of tracks that vary wildly in volume from one to the next.

A good way to curb these problems and acquire more control over the way your tracks sound is to insert in a preamplifier. This external box acts as the middle man between the instrument and the computer, and can be used to filter, clean-up and boost the initial audio signal to make for a better sounding recording.

To use a preamp, simply connect your instruments and/or microphones to the device's inputs, and run a 1/4-inch cable from the box's output to the line in of your PC's soundcard.

Preamps typically have both an XLR input (for connecting certain microphones), and a 1/4-inch input for connecting instruments (keyboards, electric guitars, and so on). Microphones that have an 1/8-inch stereo mini connection instead of XLR can also use the 1/4-inch input via an inexpensive stereo mini-to-1/4-inch adapter.

The most basic advantage to using a preamp is that it will boost the volume level and strengthen a quiet audio source. When audio is recorded at a low volume level, it invites problems later on in the mixing stage, when you try to boost the level with your editing software, you'll find that the level of unwanted background noise will be boosted as well, resulting in a noisier signal. The louder and cleaner the audio is when recorded at the source, the easier it will be to manipulate it later on.

A preamp can also add warmth to a track by boosting the level of upper



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harmonics or "overtones" in a sound. Vocals will have more "presence", instruments will have more depth, and drums will pack a bigger punch.

By the same token, preamps have LED indicators to warn you when an incoming audio signal is too loud, so that you can reduce the input volume accordingly in order to avoid clipping and distortion. You can also make use of the limiter and compressor tools to set and restrain the audio at a consistent volume and eliminate high and low peaks.

Another handy function of the preamp is noise suppression—that is, getting rid of unwanted hiss and hum that can get in the way of a clean audio signal. White noise—the inherent noise produced whenever a electronic flows through a component—is a common problem that can be

dealt with by using a preamp's white noise reduction function.

Preamps also have switches to eliminate low and signal interference like hum and pop, which are problems generally associated with recording acoustic instruments through a microphone.

Another feature preamplifiers offer is "phantom power." Basically, this is a power supply that supplies condenser microphones with the required +48V operating voltage.

Like any piece of studio gear, there's a wide variety of products and price ranges that encompass the professional studio class in the humble home studio and everything in between. Luckily, preamps that cater to home studios can be quite affordable.

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A basic all-around preamp like Behringer's UPhoria UM200 costs around \$70 (from US\$59.95) and comes with standard features like gain control, LED clip indicator, microphone and 1/4-inch line-ins and outs, gain control, phantom power and 38 different presets designed to add warmth or limiter under a variety of settings geared to different instruments and recording situations. The ultra-compact M Audio Audio Buddy for \$145 (from US\$119.95) weighs less than half a pound.

The Roland MMP 2 sits at the higher end of the range of home studio preamps, costing \$240 (from US\$199). The MMP 2 features the rather unusual addition of a USB port, which allows users to access its built-in graphic interface software for things like adjusting EQ and compression levels. Roland also says that in future it will offer additional effects software like noise or noise suppressor from calling, and feedback eliminator that can be downloaded from the PC to the MMP 2 via USB.

By Don Bell

Decoding the jargon

Clipping — A kind of distortion that occurs when the input level of the audio is so high that it exceeds the equipment's capacity to handle it, resulting in the peak audio levels being cut off.

Gain — Refers to the ratio at which the audio signal changes within the preamp from input to output. Measured in decibels (dB). For example, if the preamp changes the audio signal from a power of one volt at the input, to a power of 10 volts at the output, the said preamp has a gain of 10 dB.

Limiter — A setting that adjusts the audio's output level to ensure it never exceeds a certain threshold in order to avoid clipping.

Phantom Power — This configuration supplies the correct voltage for powering microphones that generate their own electric signal, such as condenser microphones.

Phase reverse — This function inverts the audio signal, thereby causing a "cave-de-cave" You'll only need to worry about this function if you plan on recording your audio in stereo across two channels. If it comes through both the left and right speaker as opposed to being stereo recording, which is one channel through the left speaker only. Phase reversing a stereo audio signal helps you detect if one of the channels has accidentally been recorded out of phase, which will result in a blurry or incomplete sound.

Popping — A pop occurs when there's a sudden spike in the gain, typically caused when vocalists make "p" "b" and "t" sounds into the microphone.

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Upgrading Brand Name PCs: Part One

For years I struggled with home-made PCs that had one software problem after another. Fed up, I bought a Dell it arrived, I took it out of the box and plugged it in, and it worked.

Unfortunately, a quick-starting brand name PC can cause you headaches at upgrade time, especially if it's an older model. The reason: "There are some brand name PCs that are hard to upgrade due to their use of proprietary parts," says Dan Chu, product development manager for Ontario's Northern Micro.



"Generally, this problem only occurs with older brand name PCs — those using Pentium II-generation processors or earlier."

Another potential issue with brand name PCs is motherboard limitations. To get a great price, you may have unwittingly restricted the system's upgradeability. A case in point is the Dell Dimension 2300 sitting on my desk. Equipped with a Celeron 1.1 GHz Intel chip, its Intel C450LE motherboard only has two DIMM memory slots and four PCI expansion slots for daughterboards. Add the fact that the case only has one 5.25-inch and two 3.5-inch bays, and there's not much I can do with this machine.

Or is there? Let's find out what can be done to upgrade this machine and some other Dells as well.

Step One: Learn what's in your brand name PC

Finding out what's inside your brand name PC is easy, right? You still have the packing slips and manuals, so all the specifics are in your fingertips. (Okay, enough silliness: We both know that all of this vital stuff is long gone.) No worries, you can get the details by searching through your PC's System Properties in Windows. For instance, in Windows 2000 (which I use), the path is Settings, then Control Panel,

then System.

An easier method is to visit www.powerlap.com and click on the "PowerLap Online Upgrade Configurator" icon. (PowerLap makes CPU upgrades that can boost a 260 MHz Pentium II PC to a 1.4 GHz Celeron; we'll talk more about them later.) This site will look at your system's innards, then give you a complete report of what's inside.

Once the PowerLap Online Upgrade Configurator has done its stuff, be sure to print the onscreen report. You'll want this as reference material when you are looking for upgrade parts.

Next, go to Google and type in the name of your system's motherboard. This will provide you with links that describe your motherboard's specifications, requirements and limitations. Don't be concerned if you see a message on the motherboard's Web site that says your motherboard is "no longer being supported." This just means

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Step Two: Define your PC's limits

With a little bit of research, you've found out what kind of parts your motherboard will and will not accept. This information is vital because you don't want to buy non-proprietary parts that won't work in your brand name PC. Meanwhile, newer brand name PCs (Pentium-based up) that don't have proprietary issues will still have limits. For instance, the fact that my Dell Dimension 2000 only has PCI expansion slots — and only four of them! — severely restricts my ability to add a newer video card with its own onboard CPU. I've been thinking of doing this because this extra processing power would reduce the demand on my 1.1 GHz CPU.

Step Three: What can be upgraded

Even with the limits of an older motherboard, there are still as many number of changes that can be made to boost its performance.

First and foremost is memory. If your brand name PC isn't as loaded with memory as it could be, then now is the time to raise it out. My Dell Dimension 2000 was only running 128MB of SDRAM DIMM, surely adding more would help my performance.

To find out, I logged onto Corsair Memory (www.corsair.com)

and clicked on their "RAM Guy" link, which let me search for memory sticks to raise out my 2000. As it turns out, this unit can handle two 256MB DIMMs. By adding them (which I subsequently did) I quadrupled my system's memory!

The next item to upgrade is storage. If your older PC doesn't have enough space, add an extra hard drive. In some cases, you may only have the space inside your case to replace the older drive with a newer one. If so, be warned that you will have to reformat the operating system, drivers and all of your software on the new disk, so make sure that you have all the programs/data you need before pulling your old drive out.

In the case of the 2000, it currently has a 18GB Master hard drive onboard. I have got a newer 320GB Master sitting on the shelf, ready to take its place.

The third upgrade you can make is to add better video and sound cards to your older PC, if the architecture allows it. Adding a video card with onboard processing can help an older PC play some of the newer, more system-intensive videogames being released. In the same way, adding a new sound card can turn a stereo PC into a 5.1 surround system (once you add the right speakers).

A word of advice: Talk to the techs at your favourite computer store before attempting this upgrade. Your older PC may not have the ability to accept newer cards, or your system's inherent limitations (such as having a Celeron chip with a small onboard cache)

may restrict its ability to handle new games/data with a better video card onboard.

A fourth option is a CPU upgrade. A CPU upgrade is a special module that fits into an older PC's CPU slot. Once this module has been designed to allow older PCs to run new CPU chips. A case in point is the upgrade I made to a Dell 350 MHz Pentium II by installing a PowerLeap SecondOrder 1400 (1.4 GHz) Celeron CPU Upgrade. The installation is very simple, so I will explain in Part 2 next month. When in use, this PC has quadrupled its processing speed with no ill effects.

I have also installed some Dellin USB 2.0 cards in my older PCs increasing the data throughput on USB from 12 Mbps to 480 Mbps.

Next Time: We show how to install the improvements described above, and look at the cost of doing so as opposed to buying a new PC.

By James Caviezel



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native new City Fido service, which offered users the ability to transfer their home phone numbers to a Fido wireless plan, available at a rate similar to home phone service. Would this company just get swallowed up into the corporate behemoth?

Though there were some adjustments to pricing, Fido still offers a \$50 unlimited data plan – a real boon to people who like to surf the net using their phone – and still has competitive pricing for other services. Best of all, Fido customers now have access to Rogers' wider coverage area all across the country. And Fido has also just rolled out the Hystyle2, the PDA/Cell phone device aimed at a hipper, younger crowd. [We can talk about Paris Hilton and the issue of the Hystyle2's data security later.]

With Fido heading over to the Rogers network, Montreal's CPGS transmission towers were fired up. Primus Wireless launched in Canada at roughly the same time that Fido was moving its doghouse into Rogers' yard, with the aim to offer a low-cost cellular alternative using the Montreal network. As I write this, Primus has three land-line and two mobile plans, time will tell whether people embrace the new service.

While Primus' Canadian cell division had a fairly low-key launch, the same can't be said for the new Virgin Mobility service, which launched with... um... a splash. Potential customers across the country received a card with a tear-off strip that changes colour when you pee on it. If it changes, you have "the catch" – the catch being hidden cell phone fees. There are a lot of really bad plans I could make here about a promotion that encourages people to pee on something, but since I can't, I'm not going to make any of them.

Last you think that the momentum is shifting towards the CPGS networks, Virgin is making use of Bell's cross-country CDMA to ret-



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1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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work, and the alliance has already spurred Bell to launch an ad campaign of its own claiming it has no hidden fees. [Of course, that doesn't necessarily translate to low fees, but that's another story.]

It'll be interesting to see how it all shakes down in the near future: both Bell and Rogers are the big guns in Canada's cell phone space, with robust networks valued by business users. With these new services targeting everyone from teens to grandmas, the big players may have to subtly change their strategy. Again, time will tell.

By Sean Connolly

Questions and comments relating to the Wireless section, including Sean Connolly's monthly column, can be sent to sean@ubcnews.ca.



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iPod accessories: beyond the buds

Voice Recorder

Manufacturer: Belkin www.belkin.com Price: \$79.99

Note: not compatible with iPod Mini

When connected to the iPod's headphone jack, the Voice Recorder automatically activates the device built-in voice memo software that allows admirably rudimentary playback, record and erase functionality.

There's no pass-through for headphones on the Voice Recorder, but to compensate there's a tiny speaker for playback — a feature that also allows you to take advantage of the iPod's alarm function on the move. A small green LED light indicates when the unit is in Record mode. The best results are achieved by standing at least eight inches away from the mic, otherwise it can distort.

The Voice Recorder picks up voice clearly from across the room (and could

easily be used to record not only personal memos but lectures in real time to mid-sized halls, although concerts would probably be a bit too much given that audio is recorded as super-compressed wave files: 32Kbps, 16 bit, and only 8 kHz.) [to put things in perspective, CD quality sound is considered to be 44.1 kHz.]

The Voice Recorder names each file with a time and date stamp, which makes it extremely convenient if you want to transfer them to a PC for archiving. The device draws its power from the iPod instead of using a battery, but the drive is negligible.

INMOTION

Manufacturer: Altec Lansing www.alteclansing.com Price: \$299.99

Note: Lansing's sleek, and compact infinite portable speaker system comes close to matching the elegance of the iPod itself. The unit is a compact white rectangle that unfolds to reveal a docking station for the iPod with two tweeters left and right speakers positioned on either side. The iPod docks in an upright position between the speakers and can rock to them using a standard stereo cable (which is included). The unit can plug into the wall (acting in this capacity as a convenient charging dock for the iPod as well), or can stand alone on four AA batteries.

For their small size, the two tweeter speakers put out a surprisingly powerful and clear sound with good sound depth and bass frequencies. There is a tiny bit of hiss, however, that gets more pronounced as the volume is increased. Therefore the INMOTION is at its best when servicing a small to medium-sized room — which it does quite handsly.



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iBoomManufacturer: Digital Lifestyle Outfitters www.dloutfitters.com

Price: approx \$180 (from US\$149.99)

This medium-sized boom box, with a special front-positioned slot for loading the iPod into, isn't built for subtlety. A sturdy white and gray plastic frame encloses 20 watt speakers that emit a floor thumping bass. The overall is decidedly bass-heavy, resulting in some muddiness and lack of clarity in the sound output given that some drive high end is lost – on the other hand, the other extreme (this and more) is avoided completely and there's no noticeable hiss. The result is that the speakers can achieve a sound that is powerful and very loud without distorting. In fact, there really isn't a "quiet" volume setting on the iBoom, given that the lowest sound you can get before it cuts out altogether is still moderately loud.

Without the iPod, the unit functions as a pretty decent FM tuner with two station memory presets.

The iBoom is powered by six D batteries, but can also turn on an AC adapter that folds up into a compartment accessed through the battery bay. When the AC adapter is plugged in, the iPod will charge automatically. Otherwise, the batteries only power the speakers and radio while the iPod operates on its own power.

TuneCast II Mobile FM TransmitterManufacturer: BeMat www.beMat.com Price: \$39.99

The TuneCast II can be used to broadcast the iPod's playlist over the radio frequencies broadcast by any device with an FM tuner – from alarm clocks to car stereos.






In order for it to work, the FM radio must be set to a weak frequency (one that isn't broadcasting any audio). Then the TuneCast – which connects to the iPod's headphone jack and automatically powers on as soon as it detects audio coming out of the iPod – must be calibrated to the same radio frequency.

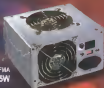
During our test, the TuneCast maintained its strength up to 25 feet away from the radio source, even with a couple of walls in between and several RF devices running interference.

If you already have an FM tuner with decent speakers attached to it, the TuneCast proved reliable enough to be seriously considered as a cheaper alternative to buying iPod speakers; also, using the the TuneCast means that the iPod isn't too loud.

By Gini Bell

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A network to call your own!

Home computing has certainly changed a bit over the past few years. Instead of dialing out to a modem somewhere else in the world, broadband networking pumps the Internet into your house at almost a hundred times the speed of that old dial-up modem.

With all of that bandwidth just ready to be used up, it's no wonder that many people are setting up home networks to share that broadband connection—either DSL or cable—with multiple computers in the same house (or, hell, with a home network in place, you can also share your files between computers and stream multimedia files to a multimedia adapter connected to a television or stereo).

For the nontechnologist, the idea of setting up a network is a bit intimidating, especially since networking has long been considered the realm of tech wizardry. No longer. While you can mess about with multiple network cards and manually configure peer-to-peer networking connections between your computers with nothing more than a few Ethernet cables, it's easily not worth the time, expense and effort, since the cost of broadband sharing routers has dropped substantially. These routers, which handle all of the networking for you, cost about \$75 to \$200, even with 802.11g wireless networking onboard.

Pick out the proper hardware

The first important step in setting up your home network is making sure that your computers all have an Ethernet port onboard, or have a wireless adapter.

For those not completely sure what an Ethernet port is, it's a jack on the back of your computer or notebook that looks like a phone jack but a bit wider, and with six pins instead of four. If your computer doesn't already have one onboard, it costs \$20 or less to add one, but you'll need a free PC slot on your PC. (If you have no clue what any of this means, ask a techie, your mom, or talk to your friendly neighborhood computer shop.) For extra extra, you can install a wireless networking card too: that PC slot instead allowing you to connect to the wireless router without having to string any cables.

If you don't have a slot free, and you have a notebook computer, you can generally add wireless networking (also known as WiFi) with a USB adapter. This has a wide benefit: with a long USB cable, you can easily re-



position the wireless antenna for best reception, rather than leaving it buried behind your PC under a desk somewhere. The third way to add WiFi applies to notebook computers with a free PC Card slot: Most wireless networking companies also offer WiFi cards for the PC Card slot, at a slight price premium over USB or internal versions.

The second part is hooking them all up together. This is where the broadband router comes in. The basic chain of connection:

Broadband Modem <--> Router <--> [multiple wireless] <--> PC

Each broadband router comes with a number of Ethernet ports on the back. The ports labeled "LAN" connect directly to your home computers. One of these ports is labeled "WAN" for Wide-Area Network. This is the one you connect to your broadband modem.

If you live in a small apartment, you might be able to make do with a simple wired router and a few Ethernet cables. As the size of the apartment or home increases, a wired router becomes less practical because the entirety of your living space will start to resemble a cable farm. Wireless networking definitely helps by creating a cable-free connection between your broadband router and wireless-enabled computers. The downside is that the maximum range for most wireless connections is a couple hundred feet, and any heavy building materials like concrete or steel will reduce the range substantially.

802.11?

Wondering which wireless networking standard you should go with? 802.11a and 802.11g are the most popular wireless choices for the home, and they each have different capabilities.

The 802.11g standard offers up to 54 Mbps data transfer rates, which is already faster than the fastest home broadband connections. You might think that 802.11g's 54 Mbps data rate offers way more bandwidth than you need, but remember that you can also use your home network for streaming your media files. Even the PC to a TV. The slower 802.11b just isn't fast enough to reliably transmit a video signal, but the faster 11g can handle video without too much problem.

Because the price difference between 11b and 11g products tends to be minimal in these days, it's really a moot point: go for the 11g option.



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Wireless



and get the extra bandwidth. Just remember that even though 11b and 11g are interoperable – meaning that you can use an 11b router and 11g notebook, or vice versa – your connection speed will always default to the lower of the two, 11 Mbps. For maximum bandwidth, go 11g all around.

Getting secure

It's something that should be drilled into every computer user in this era of rampant viruses, spyware, and other threats: you have to make sure you are as secure as possible. Unfortunately, adding a wireless network to your home without changing any of the default settings can be a pretty clear invitation to no-goodniks who want to take advantage.

The very first thing you should do once you get your broadband router up and running is to change its default password, because anyone who has the password can change the router's settings. Unfortunately, this means that someone who winds up at your router from the outside world can also change your settings, if they can guess at your password. Once logged in, they can find out what machines are connected to your network and change the security settings on the router to allow them to connect directly to any of your computers.

When you're choosing a password, it's always best to choose one that's not obvious. Common words or names are bad. An entire quotation (if you can bear to type it) is good. A combination of numbers and uppercase and lowercase letters is ideal – especially longer strings. A four-character password is more easily cracked than a ten-character password. Tenety would be even better.

The second thing to do is configure your wireless connection. If you only got the wireless router because the price was low, but aren't planning to use wireless networking, configure it immediately, turn it completely OFF.

If you'll be using wireless, turn your wireless encryption ON, or people with wireless "sniffing" programs will be able to intercept anything you transmit, including usernames and passwords. There are two types of wireless encryption found on consumer routers: WEP and WPA.

WEP comes in either 64- or 128-bit "strength" – a term that refers to how long the alphanumeric key is. A 64-bit key translates to 16 hexadecimal characters, and 128-bit translates to 26 characters. You simply add your WEP key into the appropriate column on the router and your wireless computers, allowing each end to decode the signal if

your wireless network had a WEP key set up, computers that don't have the key won't be able to wirelessly connect to the network.

Wired-wireless networking products allow you to troubleshoot key by using a pass phrase instead of a string of numbers and letters, which is more user-friendly. But if you choose too easy or obvious a pass phrase, it will fall into a false sense of security, since it can be easily guessed. Because the newer WPA encryption protocol only uses pass phrases, you'll definitely want to think up a good one if you use it. Since you have a good (i.e., suitably complex) pass phrase in place, WPA will be even more secure than WEP.

Another way to be more secure is to disable SSID broadcast on the router itself. That way, your wireless router won't even appear in the list of available wireless networks. If you have the proper settings, you should be able to connect, however. This is not for everyone, though. Some computers may not be able to connect to networks they don't "see," and determined hackers with the proper equipment will be able to find the wireless router anyway with a bit of work. At the very least, changing the default SSID name will make it less obvious what type of router you have, which will add a touch more security against the hacker with less dedication.

Drilling a hole through that firewall

Once you've got your network secured, you'll probably want to open up any holes in the router to allow certain applications/unwanted access in both directions. This could include applications involving webcam conferencing, streaming media, or peer-to-peer file sharing.

In general, wireless broadband routers ship with Network Address Translation (NAT) turned on. This feature acts like a firewall, blocking computers from outside your local network from walking right into your home network, while still allowing your local computers to communicate with each other. The NAT feature typically keeps open ports traditionally regarded as safe, like email or web access ports. Many other ports tend to be slammed shut, after all, why lock your doors to troublemakers, then allow them to enter through a wide open window?

The problem is, some applications require specific ports in order to function properly. Many programs, such as AOL Instant Messenger and BitTorrent, that use specific ports are configurable, allowing you to use the port the program uses and change it to another one. Once you know which port you're using, you can open that port up on your router, either by opening it completely, or by forwarding incoming traffic on that port to a specific computer.

You may be asking, "Why not just use Universal Plug and Play (UPnP) to set up these connections?" UPnP is designed to allow your computer to make specific requests to your router to open up ports. This makes it very easy for UPnP-enabled applications to open up the necessary ports, but it also makes it very easy for unauthorized applications on your computer (i.e., trojans or spyware) to do exactly the same thing. Security-conscious computer users will want to disable UPnP altogether and open the ports manually.

Share and share alike

One of the beautiful things about setting up a home network is the ability to move your files from one computer to another. The only thing is that before your computers can see each other, you'll need to set up sharing. With Windows machines, you can share specific folders or entire hard drives by right-clicking on them and selecting the "sharing and security" option. After ticking a box to "share this folder on the network," you can give it a special name to identify it to other users of the network, who will be able to access the folder or drive through the "My Network Places" icon.

The great news about file sharing is that you don't all have to be using Windows-based machines — you can also share files between Windows,

Mac, and Linux machines.

For Mac OS X machines, you'd go to the System Preferences menu and choose "Sharing" from the Internet and Network sub-menu. With Linux, you can set up Samba for file sharing between machines. Samba, generally, comes standard with newer Linux distributions.

By Sean Connelley

WiFi Glossary

If you're just starting to look at the world of wireless networking, you have to master a bunch of seemingly cryptic lingo. Here's a basic primer.

WiFi: Short for "Wireless Fidelity," WiFi is often used interchangeably with 802.11b, but refers specifically to an adherence to a set of standards for these two wireless protocols designed to allow wireless networking devices to work seamlessly with each other.

802.11a/b/g: "802.11" refers to the IEEE classification for wireless networking and the letters at the end denote the frequency. 802.11a was the first out of the gate, and featured 11 Megabits (Mbps) per second data transmission speed. The 802.11a standard followed shortly thereafter, offering data speeds up to 54 Mbps, but its different radio spectrum (5GHz as compared to the 2.4GHz) meant the two standards weren't interoperable, and thus it's not widely used. The 802.11g wireless standard uses the same spectrum as 11b to facilitate interoperability, but bumps the speed up to 54Mbps. With any of these standards, transmission speeds are slower the further away you go from the router.

Channel: Wireless networking data is transmitted on channels numbered 1 to 11 in North America. This is to ensure your wireless router and computers are only listening for data intended for them in areas where more than one wireless network is set up. The default channel is 6 or 11 in many regions. You can change this on the router's configuration Web page.

SSID: Service Set Identifier. This is the name for your router or network. The SSID allows users to identify different wireless networks that may be used for different things and different departments. These SSIDs can be changed by the router administrator for easy custom identification or to obscure easy identification — your choice.

WPA/WPA2 encryption: By default, wireless networking signals are sent over the airwaves without any protection — anyone that could listen in on the data stream could reconstruct it. Encryption creates a secure encoded channel between the wireless router and a wireless-enabled computer. The first standard Wireless Encryption Protocol (WEP) is available in 64- and 128-bit strengths and requires a predetermined hexadecimal "key" to be set up in both ends. WPA Protected Access (WPA) is a newer, more secure encryption protocol.

Wireless Network Checklist

Basic requirements

- broadband router with 802.11g or 11n wireless network
- computers with Ethernet ports or wireless adapters
- Ethernet cables long enough to reach your computers, if applicable
- broadband internet connection (DSL, cable or even satellite)

Security

- Make sure you change your router's default password
- Change the default SSID to something more personally relevant
- Enable wireless encryption and choose the strongest encryption method available at both ends
- Use non-obvious passwords (preferably 8-10 characters or more, with both numbers and letters)
- Don't write your passwords down and leave them in an obvious place!

High upon the middle ground: Canon PowerShot S70

In the vast middle ground of the digital camera world stand a fair number of cameras suitable for the photo enthusiast without a particular interest in digital SLRs. Canon's PowerShot S70, residing in the higher end of the mid-line digicams, is an excellent example.

The S70's key distinguishing feature is perhaps its design, simple in its rectangular shape but singularly good looking. A black brushed metal lens cover slides out of the way to turn on the camera and fully expose the flash, which is slightly off center to the lens's left. It's a shame that, given the wider than average face of the camera, Canon

didn't find a way to put more physical distance between the 28-135 mm equivalent 3.6x optical zoom lens to reduce flash glare and the dreaded red-eye when shooting straight ahead.

What sets the P1 megapixel S70 apart from others in its class is an extensive feature set that allows users much more control over composition. Users can turn off automatic aperture and shuttler selection to choose the best possible shooting mode for a scene, or can set shutter or ap-

erture priority and let the camera figure out the rest. Users can also turn off auto focus using the MF button to the left of the viewfinder. Manual focus has limited use in non SLR digital cameras since using the LCD display to set focus is far from optimal. However, the MF button doubles as an auto-focus lock. Users can compose a scene, focus on a central object then lock the focus and recompose, putting the subject out of the direct center of the shot for generally more pleasing results.

The biggest complaint is its underwhelming 1.8-inch LCD display. With even some entry-level cameras sporting the same size LCD, one might think that the high end of the consumer digital camera spec train might skip it up.



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www.canon.ca
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Title of Entry:

Camera Used:

Software Used:

Star Fox Assault

Publisher: Nintendo Developer: Nintendo Platforms: Gamecube

Star Fox Assault began promisingly – with a flying level. Flying, after all, is what arming pilot Fox McCloud has done best ever since he debuted in the 1993 Super Nintendo polygonal rails shooter Star Fox.

In this latest game, Fox and his squadron mates Falco, Peppy and Krystal are called upon to stop the invasion of the bug-like Aparoids. Their quest takes them to a few familiar places and they cross paths with a few old friends and enemies along the way as well.

The graphics of the opening level are gorgeous, and Fox's arming handles smoothly as all the familiar Star Fox elements come together: blast enemies with guns and bombs while spinning and rolling to avoid, then fire, collect shield and weapon power-ups, and help your squadron mates when they get into trouble.

Then Fox is dumped onto the ground to fulfill a lackluster ground mission,



maintain any kind of testing momentum.

These ground missions are frustrating for a few reasons, one is the fetch-quest nature of the goals (kill a number of enemies, disable a number of generators, and so on), and another is the mission map. Mission goals are represented by red dots on the map, which get smaller or larger according to how close to them Fox gets in relation to their depth. Unfortunately the flat map makes it impossible to gauge depth, so Fox may in appearance be right on top of one of the dots when in actual fact the goal is several levels above or below him.

Star Fox Assault is proof positive that Fox McCloud belongs in the sky. Here's hoping that the next franchise installment sticks to this instead of trying to do all things to all people.

By Erin Bell

INFO BOX

- ★ **Staring command:** Force mode with rapid aim.
- ★ **Star to complete it on:** enemy.
- ★ **Star to complete it on:** enemy.
- ★ **Star to complete it on:** enemy.
- ★ **Star to complete it on:** enemy.



Devil May Cry 3: Dante's Awakening

Publisher / Developer: Capcom

Platform: PlayStation 2



half man.

As gamers progress through the largely hack and slash gameplay, a patch work story reveals itself. The story, told with short but action-packed cutscene sequences, gives fans of the series some insight into Dante's on going and the reason he's forced to evict some horde of netherworld residents. Previous Devil May Cry games (named after our protagonist's private

Dante, the protagonist of the Devil May Cry series, has something of a checkered past. As a private investigator, our hero operates for the greater good, sometimes at the expense of the law. Oh, and he was once by a reformed demon warrior named Sparda, making him half demon,



interrogation agency) inserted themselves with fast-paced gameplay, slick visuals and imaginative monsters from the netherworld. The first in the series was heavy on the action, receiving critical acclaim as a result, but a true plot was hard to find. The second game

still forwarded the plot and slowed down and simplified the action somewhat. Besides.

The third installment, Dante's Awakening, maintains the frenetic pace and high difficulty level of the first game and adds an extensive story line. The difficulty level, dumbed down for mass consumption in Devil May Cry 2, has been raised by several degrees: too many degrees, some might argue. Even on the easiest setting, unlocked after dying twice in "normal" mode – new seasoned gamers will find themselves routinely outnumbered, outmaneuvered and dispatched. However, if players take the time to overcome the immense difficulty requiring a constantly evolving battle strategy, fast thinking and a little luck, they'll find one of the more rewarding hack and slash single games with an interesting – if occasionally cheesy – story.

Between epic battles, gamers will have to solve fairly simple gameplay puzzles to progress, find new melee and ranged weapons, purchase new skills and enhancements and upgrade weapons like Dante's two pistols, shotguns and even rocket launchers collected in the course of the game.

By Andrew Howe-Draper

INFO BOX

- ★ **Interesting story:** Detailed back and forth story.
- ★ **So difficult to see game:** Detailed story, story.
- ★ **So difficult to see game:** Detailed story, story.
- ★ **So difficult to see game:** Detailed story, story.
- ★ **So difficult to see game:** Detailed story, story.

Splinter Cell 3: Ubisoft's ascent into chaos

Mathematically speaking, chaos theory refers to the concept that a small action made in the present can have large repercussions in the future — "a butterfly flapping its wings in Brazil can cause a tornado in Texas months later" gets the common description. In the case of Splinter Cell protagonist Sam Fisher, breaking a lock or leaving a door open early in the game can trigger a series of events that could have lethal consequences.

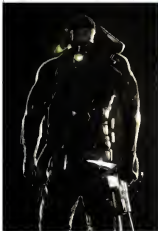
It's fitting that Chaos Theory is the subtitle of the third game in the



Splinter Cell franchise, on store shelves this month for PlayStation 2, Xbox, PC and GameCube after more than two years in development at Ubisoft's Montreal studio. With it, game design has moved away from the rigidly linear structure of past games to create a playground that allows gamers to complete tasks in more than one way, to experiment and make mistakes and — most importantly — be able to stick around to see what longer-term repercussions their actions may have.

Ubisoft Montreal began developing Chaos Theory right after finishing the first Splinter Cell. [The second title in the series, subtitled Pandora Tomorrow, was developed in China by Ubisoft Shanghai.] While the first game was hailed for its technical innovations, particularly in the areas of light and shadow, it also had a reputation for doing out-there things to gamers who tried to deviate from the way the scenarios were "meant to be played." The game meant out-there retribution for mistakes, usually in the form of an abrupt Game Over that dumped the play at back to the beginning of the scenario.

It's an issue that Ubisoft acknowledges. "There was a lot of trial and error in Splinter Cell One, and a lot of frustration and mood gone over all versions," said Chaos Theory producer Matthew Fordell, who took the time to chat with us despite his hectic schedule. It was Feb. 25 and Ubisoft was in the process of submitting the Xbox version of Chaos Theory to Microsoft for their final approval. "At one point," he continued, referring to



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the first game, "Sam Fisher is going to enter numbers on a keypad, he moves one, and it's game over. This doesn't make sense."

The goal with Chaos Theory was therefore to create a more flexible non-linear structure that would encourage gamers to experiment. Players are now given primary and secondary objectives that they can complete in any order they choose by using a variety of different methods.

In order to fully support the non-linear structure, Chaos Theory allows the gamer to save anywhere at any time, and load anywhere at any time. "Originally it was just to give more freedom to the player, but what we realized is that there's a lot of tension in this game, so instead of fighting to stay alive and reach the next checkpoint, [players] can save and then experiment with things they wouldn't otherwise do, and then they will learn more and experiment more, and they will enjoy the game much more."

Another major decision was to get rid of traditional cutscenes. Rather than pulling players out of the action and forcing them to passively watch mini-movies to advance the plot, the goal was to develop some key dialogue situations that would appear inside the view of the character, leaving Sam free to move around as he watches the action unfold in front of him. If he wants to disrupt the action and shoot everyone, the game supports that as well. But again, there will be consequences.

Sam also has a loaded up arsenal of weapons - he's now more than capable of shooting his way out of a tight spot using a rifle or shotgun. He has a few new non-gauche tools as well, such as a tweaked sticky cam that allows him to shoot multiple sticky cameras and toggle between them, creating his own personal surveillance system to monitor a specific zone. Ferland stressed that the experience is still much better if it's left in view. "You can hear the funny conversations of the guards and experience the excitement created by the tension of sneaking up right behind someone. Nevertheless, "some gamers like to shoot, so the game supports that too," he explained.



At the same time, Ubisoft wanted to continue to push the envelope technically. This involved scrapping large parts of the existing architecture and developing more advanced technological structures that would carry over into the next generation.

The end result is a game that pays a lot of attention to the

little details. Ferland is especially proud of what he calls the "organic" feel of the environment. When it rains, for example, you can see the water glistening off the rocks and walls. Sam's hair will become matted down and wet will start to soak his clothing. Puddles will slowly form on the ground.

Sound effects like thunder occur in real-time and are generated within the 3D environment. In other words, when you go through a door you won't suddenly hear the ambience of the next room because you've triggered them by stepping into the new area. Instead, from the moment Sam begins to open the door you'll be able to hear the sounds from the other room, and they'll get louder the closer Sam gets to them.

"If you're in a building and there's a helicopter on the roof, you're going to hear the bass, so as soon as you open the door, you're gonna hear high or frequencies, and then as soon as you go outside you're gonna hear the whole sound," Ferland explained.

The innovations in audio are especially interesting given this addition



of an ambient noise gauge, which works in the same way as the new familiar light gauge. Just as Sam could go undetected by using the natural shadows in a room to his advantage, now he must act below a certain threshold of noise as well. Various things can increase the noise gauge and work to Sam's advantage. Switching on a generator, for example, adds more ambient noise to the area and might allow Sam to run undetected. Sam can also synchronize loud actions with loud noises that will mask the sound - a gun shot with a thunderclap, for example.

Chaos Theory certainly represents some ambitious, under-forward technically and conceptually. In it, as Ferland explained, meant to serve as a bridge between the current and next generation of videogame consoles, some of which are expected to come out as early as Christmas 2005. It has also prepared Ubisoft Montreal for the demands of working on a next generation title. To put things in perspective, around 100 people worked on the first Splinter Cell; by contrast, 123 people worked on the Xbox and PC versions of Chaos Theory alone, with another 123 responsible for the PS2 and GameCube versions. Ferland estimates that developing a next generation game will require a team of 300 people.

All told, Chaos Theory looks to be for the Splinter Cell franchise what Resident Evil 4 was to the Resident Evil franchise - an attempt to address and remedy all the things gamers found frustrating about previous games while continuing to push the series forward at the same time.

By Edie Ball

Shadow of Rome

Publisher / Developer / Genre

Platform: PlayStation 2



Picture it as Ridley Scott's *Gladiator*: The Game. As war-war Agrippa or handsome gladiator Scipianus, players must solve Caesar's murder through brute force and subterfuge, respectively. Guided into lengthy, regrettable play comes in two varieties: either you're wading through enemies and looting off limbs using one of the finest combat systems ever seen, or slowly skulking around the Senate waiting the enemy would end. Easily the most schlocky game we've encountered, the title's all the more impressive no matter how much you want to like it, the designers appear dead-set on delaying even open-minded enthusiasts.

INFO BOX



Let's back up and get a few things straight. First, however. Audio and visuals are sound, but the brilliant and the wealth of background settings satisfying. The I have it super time slithering through the streets and barbarians by the dozen, especially considering enemies go down in a hail of blood and gore. Using axes, swords and petrified arms as

weapons. Atrocious assassins can't help but have a good time cleaving some intelligent foot soldiers and gargoyle-like bosses in two. Where things fall apart, though, is during verbose story segments, throughout which the title's clunky script and tepid voice-overs prove almost as painful as a glove to the groin. And just when you think the agony is over, games again. tedious and lengthy stealth sequences await.

The outcome's almost criminal, an amazing knowledge is betrayed by no one more's need to offer a map of interest for potential purchasers of all stripes. Rather than focus on one thing – specifically, fighting – and doing a well, the developers team instead presents pointless consciousness for sake of adventure buffs, when all audiences really want is a good beating. Let's hope someone gets as tough in the obligatory sequel – a little less talk and for more action would put a lot more bounce into its stilted step.

By Scott Steinberg

The Moment of Silence

Publisher: The Adventure Company / Digital Fiction Developer: House of Tales Platform: PC

The year is 2044. AI executive Peter Wright is trying to get his life back together after losing his wife and son in an airplane accident – and not doing a very good job of it. His life takes an intriguing turn however when he gets drawn into the plight of his neighbour and his son after witnessing a dramatic scene through his apartment peep hole of a fully armed SWAT team breaking down his door during the night and dragging her husband off with but an explanation.

Peter offers to make some inquiries on the wife's behalf as to her husband's whereabouts, and soon gets caught up in a complex conspiracy involving corrupt cops, street row gangs, freedom of speech laws, extrajudicial trials, and the crazy/controlled guy who lives in the nearby park.

The game is standard point-and-click stuff that involves exploring the environment, talking to people to find out more information and clicking on

objects to interact with them or occasionally add them to Peter's inventory. And with standard point-and-click comes the standard point-and-click complaint, that you can only interact with certain items in the environment and not others, which requires a degree of "pixel hushing" to figure out what Peter is supposed to do next.

There's quite a bit of backtracking in the game – and the gameplay itself has its fair share of little glitches and quirks. For example, Peter seldom walks in a straight line to move anywhere; instead, he follows illogical, pre-mapped routes that can take a long time.

The voice acting is generally good, but the dialogue itself is ho and man. There are some inspired moments, such as the comically waspish sniping that goes on between two of Peter's co-workers. However some of the lines are downright shocking. My personal fave is: "No... better leave Brenda alone. She can get really creepy."

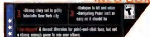
The game is set in pretty downtown New York, and offers an interesting take on the near future. Instead of going somewhere "too far" in post-apocalypse to: The Moment of Silence goes for a more realistic portrayal that, while it does showcase some neat new gadgets and ideas, still gives the impression that it could all logically happen in real life should our society continue to progress the way it currently is.

The story is pretty intriguing as well, making The Moment of Silence a quite playable decision for point-and-click fans – it likely isn't a strong enough game to be able to win over many non-fans of the genre, however.

By Eric Bell



INFO BOX



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WarioWare Touched!

Publisher / Developer: Nintendo
1999 Everyone Platform Nintendo DS
 Scoring: 4.5

WarioWare's unique approach to gaming has found a new place to happen on the Nintendo DS. It's a homecoming of sorts, while other WarioWare titles were an excellent new take on video games, combining hundreds of five-second "micro-games" onto a cartridge or disc, the DS's unique play interface is perfectly matched to WarioWare's unique style.

Using the touch-screen interface, gamers nix chop, tap, rotate and drag their way to the top, unclogging special timed game modes, new characters and "characters" in the form of extra games or cool widgets. Use a hamster. Use a character's games and national television like terminals, among them! Requires gamers to use the microphone input. Blowing into the mic will, for example, make an on-screen character blow a bubble gum bubble. Blow too hard and the bubble will pop.

With the possible exception of the microphone-based games, WarioWare travels well. Players can get a quick gaming fix, while on the bus, or sit down for an extended play session to run through the enormous and an addictive story. The only real problem, aside from the fact that gamers are forced to watch as an iPod and largely pointless story unfolds, is that blowing into your DS is sure to garner stares if played in a public place.

By Andrew Moore-Crispin

Pros

Fast gameplay
 A perfect software / hardware match
 Strong replay value

Cons

Labourous "story"
 Potentially embarrassing



SSX Out of Bounds

Publisher: Electronic Arts **Developer:** EA GAMES **Platform:** 4 Gigs



Historically, handheld versions of console titles have been drastically scaled down 2D side-scrolling or isometric affairs that share very little with their console big brothers except the same logo on the box. [Compare the handheld and console versions of The Landlord, the Frog and Prince of Persia, for example.]

With SSX Out of Bounds, on the other hand, the developers heroically struggle to cram EA GAMES



console snowboarding hit SSX 3 — 3D graphics and all — into the mobile environment.

Recognizable features and certainly there: ten snow

boarders to choose from, prize money to just chase cheaper amulets and new gear, and a mountain divided into three peaks with rising, sloping, (rock) and super pipe courses.

The 3D works well for the simplistic super pipe run, but can start to break down in the other more free-wheeling modes. Basically, control gets sluggish, and it's unfortunately a fairly frequent occurrence to get "stuck" on pieces of scenery or trapped inside an un-navigable mass of white polygons. The small screen doesn't

help matters either, lacking the ability to give a decent overall perspective of where the rider is in relation to where he or she should be going.

By Erik Bell



Klonoa 2: Dream Champ Tournament

Publisher / Developer: Square **Platform:** Game Boy Advance

Following on the heels of the brilliant puzzle-action hybrid Klonoa: Empire of Dreams, Klonoa 2 thankfully sticks to the formula that made the first game so enjoyable. The series' hallmark is its complex yet ingenious level design. Although the levels misrepresents as typical 2D platformer fare — complete with one main course and collectible gems — they're actually sophisticated puzzles that require the long-haired protagonist to jump, float, and manipulate the environment in various ways that require a mixture of reflexes and brawn on the part of the player.

For example, Klonoa can catch bees and other bugs then use other things (to activate switches or break crates) or use them to vault to higher heights and overcome fire deliberately timed jumping ability.

New level elements include flower pots that



Klonoa can plant flowers in to cause winds to grow, a special tool for navigating river underwater environments, and a couple of new enemies, see Klonoa can use to jump super high, and another when thrown at another enemy, absorbs it and changes colour before returning to Klonoa like a boomerang. Although Klonoa 2 is actually more than two years old (it came out in 2002 in Japan), the

innovative gameplay is more than enough to compensate for its slightly dated audio and visual aesthetic.

By Erik Bell



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